

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A transmission-type photoelectric encoder having a telecentric optical system in which a first lens and an aperture located at a focal position of the first lens are interposed between a main scale and a photoreceptor, and

wherein at least a second lens is interposed between the aperture and the photoreceptor with a focus of the second lens on the aperture, thereby constituting a bilateral telecentric optical system.

2. (Original) The photoelectric encoder according to claim 1, wherein the second lens is made identical to the first lens and is situated reversely.

3-5. (Canceled)

6. (Currently amended) ~~[[The]]~~ A photoelectric encoder according to any of claims 1 to 5, having a telecentric optical system in which a first lens and an aperture located at a focal position of the first lens are interposed between a main scale and a photoreceptor,

wherein at least a second lens is interposed between the aperture and the photoreceptor with a focus of the second lens on the aperture, thereby constituting a bilateral telecentric optical system, and

wherein one or more second bilateral telecentric optical systems including a second aperture and third and fourth lenses arranged on both sides thereof is/are further interposed between the second lens and the photoreceptor.

7. (Canceled)

8-18. (Not entered)

19. (New) A photoelectric encoder having a telecentric optical system in which two lenses and an aperture located at a focal position of the two lenses are interposed between a main scale and a photoreceptor, and wherein the two lenses comprise identical lenses having a symmetrical front and back shape with regard to a central plane perpendicular to an optical axis.

20. (New) The photoelectric encoder according to claim 19, wherein each of the two lenses is made of a ball lens.

21. (New) The photoelectric encoder according to claim 19, wherein each of the two lenses is made of a GRIN lens.

22. (New) The photoelectric encoder according to claim 19, wherein each of the two lenses is made of a drum lens.

23. (New) The photoelectric encoder according to claim 1, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

24. (New) The photoelectric encoder according to claim 2, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

25. (New) The photoelectric encoder according to claim 6, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

26. (New) The photoelectric encoder according to claim 19, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

27. (New) The photoelectric encoder according to claim 20, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

28. (New) The photoelectric encoder according to claim 21, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

29. (New) The photoelectric encoder according to claim 22, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.